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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/608,737	06/27/2003	James D. Parsons	378-21-020	7690
23935	7590	02/03/2005		
KOPPEL, JACOBS, PATRICK & HEYBL 555 ST. CHARLES DRIVE SUITE 107 THOUSAND OAKS, CA 91360			EXAMINER EASTHOM, KARL D	
			ART UNIT 2832	PAPER NUMBER

DATE MAILED: 02/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

H.A

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/608,737	PARSONS, JAMES D.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Karl D Easthom	2832	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37.CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 December 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-69 is/are pending in the application.
- 4a) Of the above claim(s) 15-16, 31-32, 37-39, 47-48, 53-54, and 60-69 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 11-14, 17-20, 24-30, 33-36, 40-46, 49-52 and 56-59 is/are rejected.
- 7) ☒ Claim(s) 4 and 6-10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some    \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>9/12/2003</u> .   | 6) <input type="checkbox"/> Other: _____                                    |

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1. Applicant's election without traverse of claims 1-14, 17-20, 24-30, 33-36, 40-46, 49-52, and 56-59 in the reply filed on 12/6/4 is acknowledged.

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1-2, 24-25, 40-42 and 56 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 11 of U.S. Patent No. 6,765,278. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 11 has all the elements of claim 56 since thin W film and AlN substrate are claimed in claim 11. As to claims 1, 24 and 40, claim 6 of '278 has all the claimed elements, where for claims 24 and 40, the coefficient and solubility are inherent since the same materials are used. The sensor of claim 6 meets the sensors of claims 1, 24 and 40, with all other elements similar to those noted with respect to claim 11. Claims 2, 25 and 42 are obvious variants of claims 1 and 11 since claim 11 discloses the W layer as thin film, with a thin film a well known film type in the electrical arts.

4. Claims 24-25 and 56 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 4 of U.S. Patent No. 6,649,994.

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Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 4 has all the elements of the noted claims since thin W film and AlN substrate are claimed in claim 4 except the thin film. Thin films are well known film type in the electrical arts so that such a film would have been obvious, meeting claims 25 and 56. The temperature sensitive system of claim 4 implies a source and sensor meeting claims 24-25 with the TCE disclosed while the solubility is inherent in the same materials.

5. Claim 56 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of copending Application No.

2004/0169249. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 1 has all the elements of the claim 56 since thin W film and AlN substrate are claimed.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002

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do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

7. Claim 56 is rejected under 35 U.S.C. 102(a, e) as being anticipated by Morita et al. or White. Morita discloses the claimed invention at col. 5, lines 50-60, with the W thin film layer, with AlN substrates at col. 4, lines 10-25. White discloses the claimed invention at col. 1, lines 54-66, with the W thin film layer, with AlN substrate as prior art.

8. Claims 1-3, 12-13, 17-18, 24-26, 28-29, 33-34, 40-42, 44-45, 49-50, 56-57 are rejected under 35 U.S.C. 102(a, e) as being anticipated by Chang et al. Chang discloses the claimed invention at Fig. 5 and cols. 15-16 with tungsten (W) thin film heater 56, AlN (aluminum nitride) substrate 50. For claims 12-13, 28-29, 44-45, 57, there are a plurality of parallel strands in the W thin film layer 56. The thin film meets claims 2, 25, 41 and like claims. For claim 1, the signal source is the voltage source at the top of col. 16, with the sensor the RTD or thermistor 52. For claims 3, 26, 42 and like claims, the resistant layer is the outer portions of the plate where the resistors are inside of each plate as noted at the top of col. 16. For claims 33-34, 49-50 the layer is heated and sensed as noted. For claims 24 and 40-42, the substrate and W layers necessarily must have the same expansion coefficient and solubility since they are the same materials as disclosed by applicant.

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chang et al. in view of Arima et al. Chang discloses the claimed invention as noted above except for the protective layer. Chang discloses covering the sensor by embedding as noted, suggesting protection. Arima discloses using a protective glass at the bottom of col. 3 having the claimed constituents that is highly reliable in order to protect a sensor similar to that of Chang so that such a protective layer would have been obvious.

11. Claims 1-3, 11-14, 17-18, 24-30, 33-34, 40-46, 49-50, and 56-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wado et al. in view of Chang et al. Wado discloses the claimed invention except for the AlN substrate. Chang at col. 16 discloses such a substrate of AlN as noted above as useful, and preferred to other ceramics for W systems like that of Wado, so that such a substrate would have been obvious since they are implicitly compatible with W. In Wado, the thin film of W is disclosed at col. 9, lines 30-40, with the thin film heater 4 in general on a substrate, see col. 1, lines 18-40. The sensor portion 5 detects the response, while the heater portion 4 is heated as noted at the bottom of col. 4. In claims 17-18, and 33-34 the sensor 5 indicates the temperature of the heater 4 since it measures air temperature, which is related to the heater temperature by  $\Delta T$  as noted at cols. 4-5. For claims 12-14 and 28-30, the stands of the sensor heater 4,5 and substrate 2 are disclosed at Fig. 1, the latter appearing square or rectangular so that a rectangular substrate is met or would have been obvious to fit into the desired flow pipe. For claims 24-25, the materials are the same as modified so that the properties are met. For claims 11, 26-27, the protective layer is the layer 15, with the cap layer 16, obvious where it is a metal nitride similar to the generic ceramics of Chang, where

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aluminum nitride is preferred by Chang. Claims 40-46, 49-50 and 58-59 and all other claims not specifically mentioned are similar to or the same for this purpose as claims noted above specifically having the like elements.

12. Claims 19-20, 35-36, 51-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wado et al. in view of Chang et al., further in view of Wiegleb et al. The claimed invention is as noted above except the additional substrate and W layer. Wiegleb discloses air flow sensors at figs. 5 and 7 having multiple substrates to sense flow so that it would have been obvious to form such a standard set up for flow measurements. For claim 20, see col. 6, lines 15-40, with the resistor 12c being heated as related to the other layers, obvious to sense flow as noted.

13. Claims 4, and 6-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. There is no disclosure or suggestion for the claimed protective layers in the combination as claimed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl D Easthom whose telephone number is (571) 272-1989.

The examiner can normally be reached on M-Th, 5:30AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad can be reached on (571) 272-1990. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Karl D Easthom  
Primary Examiner  
Art Unit 2832

KDE